required in certain legacy releases of 3GPP (for example, 3GPP Release 8) because if more objects are configured the network may not know which carrier frequencies at a given user equipment can be measured. However, the network may signal additional measurement frequencies in for example a newly defined system information block (SIB) or as an information element extending an existing inter-frequency SIB, such as SIB**5** and the like. In this way, a legacy user equipment (which may not be able to support measurements/monitoring of more than 3 carriers) may ignore the carrier frequencies in excess of 3 without impacting operation of the legacy user equipment. However, a user equipment supporting carriers/RATs in excess of 3 may handle the additional carrier frequency information (for example, extra neighbor carriers with performance requirements as defined by the system). Additionally, similar changes may be done in other RATs when considering reselection to EUTRAN with more frequencies than what is required in legacy 3GPP Release 8. Although some of the examples refer to 3 carriers and an excess of three carriers, other quantities of carriers may be used as well.

[0048] In the case of connected mode, the network may need knowledge regarding the user equipment's support of carrier monitoring in excess of 3 feature in order to know which user equipment can handle an increased amount of carrier frequency measurements objects (and thus can be signaled to perform the monitoring in excess of 3). The network may have information regarding which user equipment support measurement of more carrier frequencies than legacy Release 8 requirements (which limit the monitoring to 3) via separate capability/feature group indicators signaling or a specific user equipment release indication.

[0049] FIG. **3**A depicts an example of a process **300** for implementing relaxed measurement requirements, in accordance with some example embodiments. The description of FIG. **3**A also refers to FIG. **1**.

[0050] At **305**, a user equipment may receive a measurement configuration for excess of three carrier/radio access technologies, in accordance with some example embodiments. For example, user equipment **114**C may be in an IDLE mode, and may receive measurement configuration information (which may be signaled, broadcast, and/or provided in any other way as well as specified) indicating measurements of carriers/RATs for access points **110**A-D. If the user equipment **114**C is in an IDLE mode, the network (via for example, one of the wireless access points) may signal the carrier frequency in excess of 3 (which is not supported by some of the user equipment) for measurement via a newly defined system information block (SIB) and/or as an information element extending an existing inter-frequency SIB, such as SIB**5** and the like. For example, the carrier frequency for wireless access point **110**D may be signaled via the newly defined system information block (SIB) and/or as an extension to an information element in SIB**5**.

[0051] At **310**, a user equipment may perform a measurement on the carrier frequencies in excess of three using relaxed performance requirements, in accordance with some example embodiments. For example, user equipment **114**C may use best efforts to scan and/or measure the carrier frequency for wireless access point **110**D signaled at **305**, if user equipment **114**C can handle the additional measurement. However, if user equipment **114**C is a legacy device, user equipment **114**C may choose to ignore, use best efforts, and/or scan and/or measure the carrier frequency in excess of three (which in this example is associated with wireless access point **110**D) with low priority.

[0052] FIG. **3**B depicts another example of a process **399** for implementing relaxed measurement requirements, in accordance with some example embodiments. The description of FIG. **3**B also refers to FIG. **1**.

[0053] At **390**, user equipment capability information may be provided to the network, in accordance with some example embodiments. For example, the user equipment may indicate to the network whether the user equipment supports increased carrier frequencies measurements. This may be performed via separate capability/feature group indicators signaling or indicated by for example a specific user equipment release indication. In any case, this may allow the network to know whether the user equipment supports measurements of more than 3 carriers/RATs.

[0054] At **392**, a user equipment in a radio resource control (RRC) connected mode may receive, in response to **390**, a measurement configuration for the excess of three radio access technologies, in accordance with some example embodiments. When this is the case, the user equipment may perform the measurements for the excess carriers/RATs with relaxed requirements at **310**. For example, using RRC Connected mode as an example, additional carriers (beyond the for example 3 carriers supported in legacy user equipment) may be signaled either as a new SIB, a new Information Element (IE) or similar. A legacy user equipment may not understand this new signaling but a newer release user equipment configured for more than 3 carrier measurement/monitor would. The new user equipment (which supports an extended amount of carriers to be monitored) may decode the new information. These new carriers in excess of 3 may then per default be understood as carriers on which the user equipment is only required to perform cell search and measurements using relaxed performance requirements. Alternatively or additionally, the new carriers in excess of 3 may be treated as low priority carriers on which relaxed requirements may be applied. Alternatively or additionally, there may be a mix in which it is indicated which carriers are low priority or on which carriers relaxed requirements apply.

[0055] FIG. **4** illustrates a block diagram of an apparatus **10**, in accordance with some example embodiments. For example, apparatus **10** may comprise a user equipment, such as a smart phone, a smart object, a mobile station, a mobile unit, a subscriber station, a wireless terminal, a tablet, a wireless plug-in accessory, a wireless sensor, a headset, or any other wireless device. The apparatus **10** may correspond to for example the Bluetooth™ device having the touch screen sensor and/or a Bluetooth™ device being detected by the touch screen sensor.

[0056] The apparatus **10** may include at least one antenna **12** in communication with a transmitter **14** and a receiver **16**. Alternatively transmit and receive antennas may be separate.

[0057] The apparatus **10** may also include a processor **20** configured to provide signals to and receive signals from the transmitter and receiver, respectively, and to control the functioning of the apparatus. Processor **20** may be configured to control the functioning of the transmitter and receiver by effecting control signaling via electrical leads to the transmitter and receiver. Likewise, processor **20** may be configured to control other elements of apparatus **10** by effecting control signaling via electrical leads connecting processor **20** to the other elements, such as a display or a